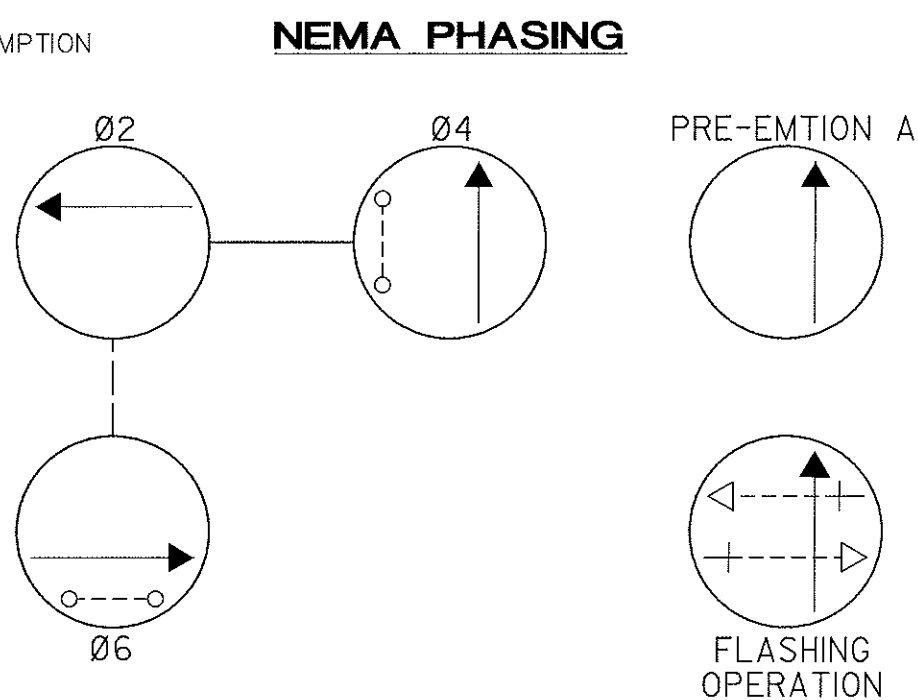
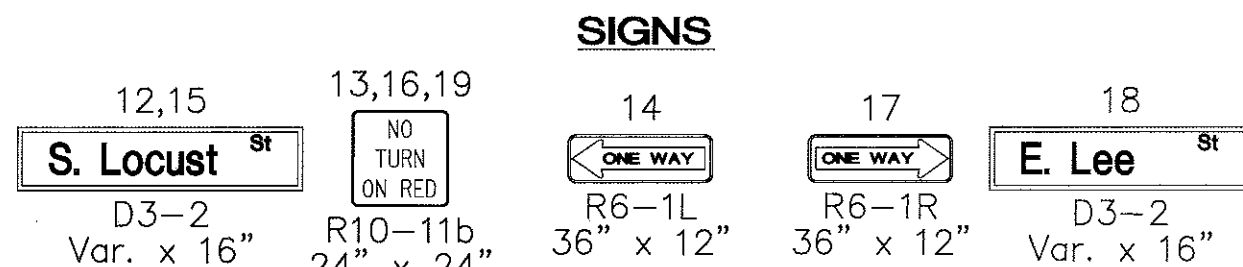
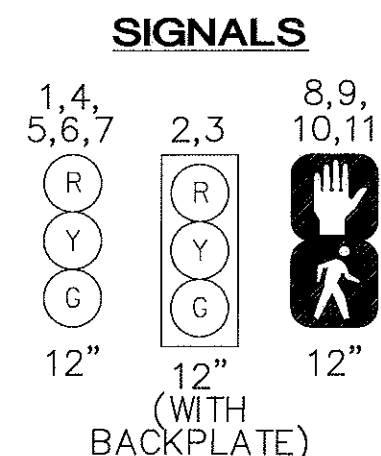


EAST LEE STREET IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

PHASING DIAGRAM											
	1	2	3	4	5	6	7	8	9	10	11
PHASE 2+6	G	G	G	G	G	R	R	W	W	DW	DW
2+6 PED. CLEAR	G	G	G	G	G	R	R	FL DW	FL DW	DW	DW
2+6 CHANGE	Y	Y	Y	Y	Y	R	R	DW	DW	DW	DW
4 CHANGE	R	R	R	R	R	G	G	DW	DW	W	W
4 PED. CLEAR	R	R	R	R	R	G	G	DW	DW	FL DW	FL DW
4 CHANGE	R	R	R	R	R	Y	Y	DW	DW	DW	DW
PRE-EMPTION A	R	R	R	R	R	G	G	DW	DW	DW	DW
A CHANGE	R	R	R	R	R	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL R	FL R	FL R	FL R	FL R	FL Y	FL Y	DARK	DARK	DARK	DARK



PHASING NOTES:

1. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY

2. PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY

CONSTRUCTION DETAILS

- (A) INSTALL 23' STEEL POLE (CITY STANDARD), 2-24' MAST ARMS, SIGNAL HEADS, OPTICOM DETECTOR, AND SIGNS (NOTE: 1-2", 90-DEGREE P.V.C. BEND).
- (B) INSTALL 23' STEEL POLE (CITY STANDARD), 26' MAST ARM, SIGNAL HEADS, PEDESTRIAN SIGNALS, AND SIGNS (NOTE: 1-2", 90-DEGREE P.V.C. BEND).
- (C) INSTALL BASE-MOUNTED CABINET, SIZE #5, AND CONTROLLER WITH ALL NECESSARY EQUIPMENT AS SHOWN (NOTE: 2-4", 90-DEGREE P.V.C. BENDS; AND 2-2", 90-DEGREE P.V.C. BENDS).
- (D) INSTALL HANDHOLE (CITY STANDARD).
- (E) USE EXISTING HANDHOLE.
- (F) INSTALL 2" P.V.C. (SCHEDULE 80) ELECTRICAL CONDUIT (SLOTTED).
- (G) INSTALL 2" P.V.C. (SCHEDULE 40) ELECTRICAL CONDUIT (TRENCHED).
- (H) INSTALL 4" P.V.C. (SCHEDULE 40) ELECTRICAL CONDUIT (TRENCHED).
- (J) INSTALL 24" SOLID WHITE LINE FOR STOP BAR.
- (K) REMOVE EXISTING SIGNAL HEAD(S) AND RISER.
- (L) INSTALL 2" P.V.C. (SCHEDULE 80) ELECTRICAL CONDUIT - RISER WITH 2" WEATHERHEAD.
- (M) REMOVE EXISTING CABINET, CONTROLLER, AND FOUNDATION.
- (P) USE EXISTING CONDUIT.
- (Q) REMOVE AND REPLACE EXISTING SIDEWALK.
- (R) CONSTRUCT ALTERNATE BRICK HANDHOLE. REMOVE EXISTING JUNCTION BOX.
- (S) INSTALL 10' STEEL PEDESTAL POLE, PEDESTRIAN SIGNALS AND SIGN (NOTE: 1-2", 90-DEGREE P.V.C. BEND).
- (T) INSTALL 12" SOLID WHITE LINE FOR CROSSWALKS.
- (V) INSTALL 10' OF 2" P.V.C. (SCHEDULE 80) ELECTRICAL CONDUIT - RISER AND COIL 25' OF ADDITIONAL CABLE.

UTILITY LEGEND

— G — G — GAS MAIN

— W — W — WATER MAIN

— S — S — SEWER MAIN

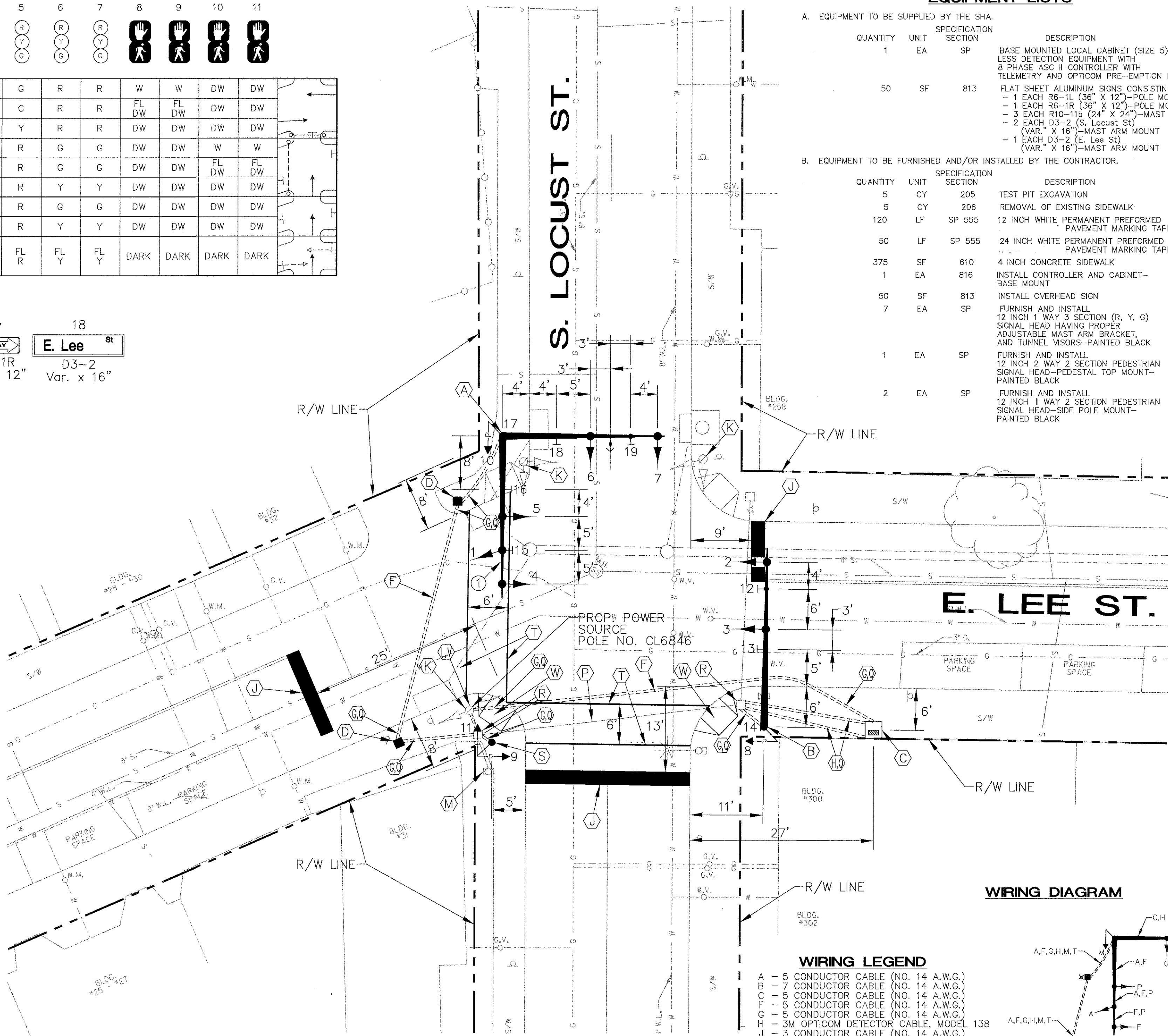
— — — — — STORM DRAIN

— TV — TV — CABLE TELEVISION

— E — E — ELECTRIC CABLES

— T — T — TELEPHONE CABLES

— A — A — AERIAL CABLES



INTERSECTION DESCRIPTION

I. GENERAL

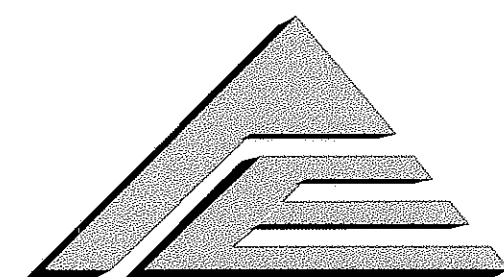
THIS INTERSECTION IS SOUTH LOCUST STREET AND EAST LEE STREET. CONSTRUCTION AT THIS INTERSECTION INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC SIGNAL AND INTERCONNECTION WITH THE OTHER SIGNALIZED INTERSECTIONS IN THE NEW CITY-WIDE SYSTEM. IT IS ASSUMED THAT EAST LEE STREET RUNS IN AN EAST-WEST DIRECTION.

II. INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA THREE (3) PHASE PRE-TIMED MODE. EASTBOUND AND WESTBOUND EAST LEE STREET WILL OPERATE CONCURRENTLY. NORTHBOUND SOUTH LOCUST STREET WILL OPERATE SEPARATELY. PEDESTRIANS WILL OPERATE CONCURRENTLY WITH EASTBOUND EAST LEE STREET AND NORTHBOUND SOUTH LOCUST STREET.

PRE-EMPTION ON NORTHBOUND SOUTH LOCUST STREET WILL CALL PRE-EMPTION A.

A NEW EIGHT PHASE FULLY ACTUATED CONTROLLER WITH TELEMETRY MODULE AND PRE-EMPTION HOUSED IN A GROUND MOUNTED CABINET WILL BE INSTALLED.



A/E GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 96-317

EQUIPMENT LISTS

A. EQUIPMENT TO BE SUPPLIED BY THE SHA.

QUANTITY	UNIT	SPECIFICATION	DESCRIPTION
1	EA	SP	BASE MOUNTED LOCAL CABINET (SIZE 5) LESS DETECTION EQUIPMENT WITH 8 PHASE ASC II CONTROLLER WITH TELEMETRY AND OPTICOM PRE-EMPTION MODULE
50	SF	813	FLAT SHEET ALUMINUM SIGNS CONSISTING OF: - 1 EACH R6-1L (36" X 12")-POLE MOUNT - 1 EACH R6-1R (36" X 12")-POLE MOUNT - 3 EACH R10-11b (24" X 24")-MAST ARM MOUNT - 2 EACH D3-2 (S. Locust St) (VAR. X 16")-MAST ARM MOUNT - 1 EACH D3-2 (E. Lee St) (VAR. X 16")-MAST ARM MOUNT

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

QUANTITY	UNIT	SPECIFICATION	DESCRIPTION
5	CY	205	TEST PIT EXCAVATION
5	CY	206	REMOVAL OF EXISTING SIDEWALK
120	LF	SP 555	12 INCH WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE
50	LF	SP 555	24 INCH WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE
375	SF	610	4 INCH CONCRETE SIDEWALK
1	EA	816	INSTALL CONTROLLER AND CABINET-BASE MOUNT
50	SF	813	INSTALL OVERHEAD SIGN
7	EA	SP	FURNISH AND INSTALL 12 INCH 1 WAY 3 SECTION (R, Y, G) SIGNAL HEAD HAVING PROPER ADJUSTABLE MAST ARM BRACKET, AND TUNNEL VISORS-PAINTED BLACK
1	EA	SP	FURNISH AND INSTALL 12 INCH 2 WAY 2 SECTION PEDESTRIAN SIGNAL HEAD-PEDESTAL TOP MOUNT-PAINTED BLACK
2	EA	SP	FURNISH AND INSTALL 12 INCH 1 WAY 2 SECTION PEDESTRIAN SIGNAL HEAD-SIDE POLE MOUNT-PAINTED BLACK

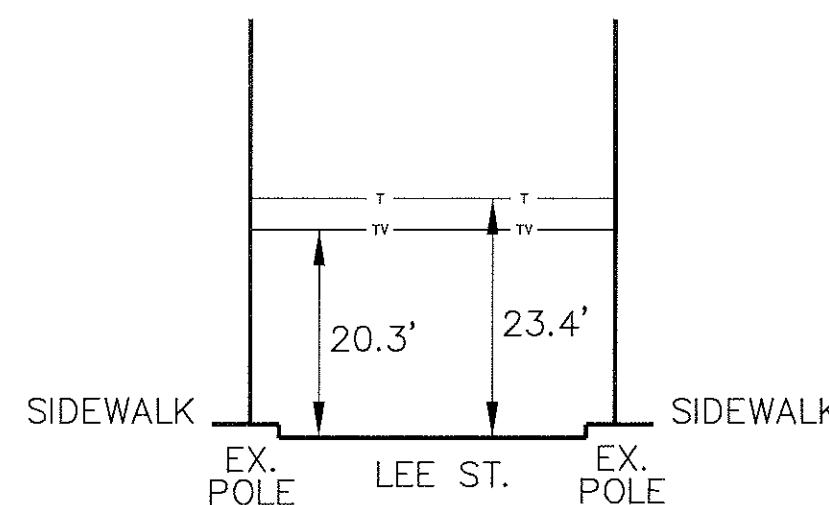
FHWA REGION NO	STATE	FED. AID PROJ. NO	SHEET NO.	TOTAL SHEETS
3	MD.	STPG-218-1(7)E	41	66

2	EA	814	FURNISH AND INSTALL BACKPLATE FOR 12 INCH 1 WAY 3 SECTION SIGNAL HEAD-MAST ARM MOUNTED
1	EA	SP	FURNISH AND INSTALL OPTICOM DETECTOR EYE-MODEL 521
2	EA	SP	FURNISH AND INSTALL ELECTRICAL HANDHOLE (CITY STANDARD)
1	EA	811	FURNISH AND INSTALL ALTERNATE BRICK ELECTRICAL HANDHOLE
9	CY	801	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
40	LF	805	FURNISH AND INSTALL 2" SCHEDULE 80 RIGID PVC CONDUIT-RISER
65	LF	805	FURNISH AND INSTALL 2" SCHEDULE 40 RIGID PVC CONDUIT-TRENCHED
25	LF	805	FURNISH AND INSTALL 4" SCHEDULE 40 RIGID PVC CONDUIT-TRENCHED
55	LF	805	FURNISH AND INSTALL 2" SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED
1	EA	807	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT
1	EA	SP	FURNISH AND INSTALL 23-FOOT STEEL POLE WITH TWIN 36-FOOT MAST ARMS (CITY STANDARD)-PAINTED GREEN
1	EA	SP	FURNISH AND INSTALL 23-FOOT STEEL POLE WITH A SINGLE 36-FOOT MAST ARM (CITY STANDARD)-PAINTED GREEN
3	EA	SP	CUT, CLEAN AND CAP TRAFFIC SIGNAL STRUCTURE
1	EA	SP	AS-BUILT FOR TRAFFIC SIGNAL
4	EA	804	FURNISH AND INSTALL GROUND ROD-3/4 INCH DIAMETER X 10-FOOT LENGTH
175	LF	810	FURNISH AND INSTALL NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
200	LF	810	FURNISH AND INSTALL ELECTRICAL CABLE-1 CONDUCTOR (NO. 4 AWG - THHN/THWN)
175	LF	810	FURNISH AND INSTALL ELECTRICAL CABLE-3 CONDUCTOR (NO 14 AWG)
450	LF	810	FURNISH AND INSTALL ELECTRICAL CABLE-5 CONDUCTOR (NO 14 AWG)
125	LF	810	FURNISH AND INSTALL ELECTRICAL CABLE-7 CONDUCTOR (NO 14 AWG)
1	EA	SP	FURNISH AND INSTALL 10-FOOT BREAKAWAY PEDESTAL POLE-PAINTED GREEN
125	LF	810	FURNISH AND INSTALL OPTICOM M-138 DETECTOR CABLE
1	EA	SP	REMOVE AND DISPOSE OF EXISTING FOUNDATION 12" BELOW GRADE
1	LS	SP	DELIVERY OF SALVAGED EQUIPMENT
1	LS	SP	REMOVE AND DISPOSE OF EXISTING EQUIPMENT
1	LS	SP	REMOVAL OF EXISTING SIGNAL EQUIPMENT TO BE SALVAGED

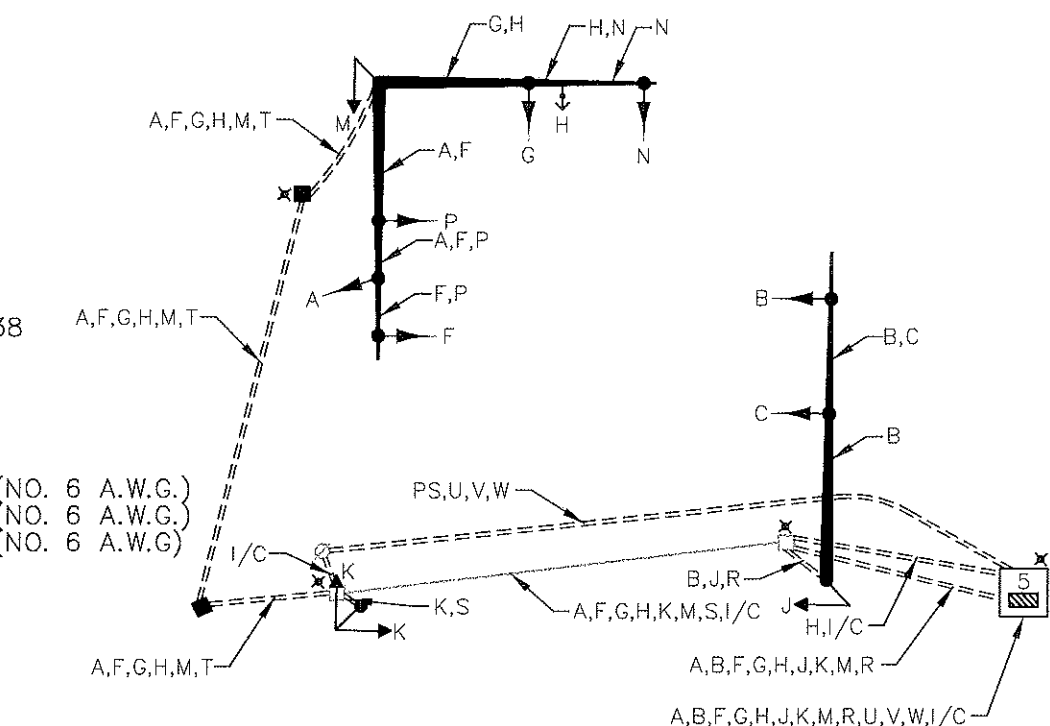
NOTE: ALL EQUIPMENT AND/OR MATERIALS TO BE REMOVED BY THE CONTRACTOR, BUT NOT LISTED BELOW, SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

QUANTITY	UNIT	DESCRIPTION
1	EA	CONTROLLER AND CABINET
1	EA	PEDESTAL POLE AND BASE

① VERTICAL CLEARANCE SKETCH



WIRING DIAGRAM



WIRING LEGEND

- A - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
- B - 7 CONDUCTOR CABLE (NO. 14 A.W.G.)
- C - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
- D - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
- E - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
- F - 3M OPTICOM DETECTOR CABLE, MODEL 138
- G - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
- H - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
- I - 3 CONDUCTOR CABLE (NO. 14 A.W.G.)
- J - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
- K - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
- L - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
- M - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
- N - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
- P - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- S - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- T - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- U - 1 CONDUCTOR CABLE (NO. 4 A.W.G.)
- V - 1 CONDUCTOR CABLE (NO. 4 A.W.G.)
- W - 1 CONDUCTOR CABLE (NO. 4 A.W.G.)
- X - 3/4"x10' GROUND ROD
- PS - PROPOSED ELECTRICAL SERVICE
- I/C - INTERCONNECT CABLE

REVISIONS	APPROVALS	MDOT - STATE HIGHWAY ADMINISTRATION			
		Office of Traffic & Safety			
		TRAFFIC ENGINEERING DESIGN DIVISION			
		LOG ML 21MLEE00.10			
		DRAWN BY: M. GESELL			
		DES. BY: J. LAWRENCE			
		CHK. BY:			
		DATE: 05/30/97			
		SCALE: 1" = 10'			
		F.A.P. NO. STPG-218-1(7)E			
		S.H.A. NO. WA9535185			
		CITY NO. 07-243-332			
		TS NO. 3701			
		SHEET NO. 41 OF 66			